

REMARKS

Claims 1, 3-7, 9, and 11-20 are pending in the present application. Claims 1, 3-7, 9, and 11-20 have been rejected. Claims 1, 6, 9, 12, 13, 15, 16, and 18 have been amended. Claims 5 and 20 have been cancelled. New Claims 22-29 have been added. No new matter has been introduced by the amendments to the claims or the new claim. Reconsideration and allowance is respectfully requested in view of the amendments and the following remarks.

The 35 U.S.C. § 103 Rejections

Claims 1, 3-7, 9 and 11-20 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Dubin (U.S. Patent No. 5,284,492) in view of WO 95/27021 and Schwab (U.S. Patent 5,669,938). The Examiner contends that “[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to add the organic nitrate ignition improver of Schwab and the anti-freeze inhibitor of WO '021 to the diesel fuel emulsions of Dubin in order to provide their known benefits.” Applicants respectfully disagree with the Examiner’s contentions and traverse the rejection.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

First, the cited references do not teach each and every element of the present application. Claim 1 has been amended to include “a water phase emulsion having 26–50

% by weight purified water, 50–74 % by weight hydrocarbon petroleum distillate, 2 – 9 % by weight antifreeze, and an additive package including at least one surfactant and at least one stabilizer, said at least one stabilizer includes ammonium nitrate, said ammonium nitrate is configured as a ignition enhancer and an emulsion stabilizer; and wherein said water phase emulsion has an average droplet diameter of about 6 microns to less than about 10 microns.” The Dubin reference does not teach the use of ammonium nitrate configured as claimed.

Further, the Dubin reference teaches up to about 30% and preferably about 10 to about 25% of a light fuel oil. (Col. 5, lines 60-65). The Dubin reference does not teach the amount of hydrocarbon petroleum distillate as claimed. The claimed amount of hydrocarbon petroleum distillate does not fall in the range as cited in the Dubin reference. Therefore, the Dubin reference does not teach or suggest each and every element.

The Schwab reference discloses an oil phase emulsion, not a water phase emulsion. The chemical formulations required to create a water phase emulsion are very different than an oil phase emulsion based on the hydrophilic-lipophylic balance (HLB). Further, the Schwab reference teaches the use of an organic nitrate ignition improver designed to provide only benefits for reduction of exhaust emissions. (Abstract) The Schwab reference does not specifically teach ammonium nitrate, nor the specially configured ammonium nitrate as claimed.

Since the Dubin reference, when in combination with the Schwab reference and the WO reference, do not teach or suggest each and every element, the Examiner has failed to make a *prima facie* case of obviousness.

Secondly, utilizing ammonium nitrate has resulted in the water phase emulsion being a surprisingly stable water phase emulsion. Because of the claimed elements, the claimed fuel emulsion has no substantial phase separation in long-term storage under typical storage conditions. Conventionally produced emulsions (such as those outlined in the Dubin, Schwab, WO, and Peter-Hoblyn references) are not as stable, experiencing significant phase separation during long-term storage. Additionally, the presence of the specific dimer acid and ammonium nitrate allows the resulting fuel emulsion to retain

larger sized droplets, as claimed. The cited references rely on at least about 70% of the droplets being below 5 microns Sauter mean diameter. The present application claims that “said water phase emulsion has an average droplet diameter of about 6 microns to less than about 10 microns Sauter mean diameter.” The so-called “secondary considerations” provide evidence of the nature and importance of this result.

The secondary considerations support the conclusion that the present invention is non-obvious. Specifically, long-felt need, failure of others to solve the problem, unexpected results and the commercial success of the invention are indicia of non-obviousness. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1573, 24 U.S.P.Q.2d 1321, 1333 (Fed. Cir. 1992). The Court of Appeals for the Federal Circuit has made it clear that such secondary considerations of non-obviousness must be considered. *In re Sernaker*, 702 F.2d 989, 217 U.S.P.Q. 1 (Fed. Cir. 1983).

The claim element “said ammonium nitrate is configured as a ignition enhancer and an emulsion stabilizer” is not taught in the prior art, nor are the effects of this element on the resulting fuel emulsion. The specific use of the ammonium nitrate provides various effects on the water phase emulsion resulting in a highly stable, with low emissions, fuel emulsion.

Therefore, as evidence of the presence of these secondary considerations, the Examiner has failed to make a *prima facie* case of obviousness.

Lastly, identification of prior art statements that, in abstract, appear to suggest claimed limitations does not establish *prima facie* case of obviousness without finding as to specific understanding or principle within knowledge of skilled artisans that would have motivated one with no knowledge of the invention at issue to make a combination in the manner claimed. *In re Kotzab*, 55 USPQ2d 1314, (Fed. Cir. 2000)

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. *In re Kotzab*, 55 USPQ2d 1317, (Fed. Cir. 2000)

The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. *In re Keller*, 208 USPQ 871, 881 (CCPA 1981).

Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. *In re Kotzab*, 55 USPQ2d 1317, (Fed. Cir. 2000) Broad conclusory statements standing alone are not evidence. *In re Kotzab*, 55 USPQ2d 1317, (Fed. Cir. 2000).

The Examiner has stated that it would have been obvious to one having ordinary skill in the art to combine the references “to provide their known benefits.” The Examiner has not provided a specific motivation to combine the references as required. There is no suggestion or incentive in the Dubin reference that would have motivated the skilled artisan to modify the Dubin reference or to combine the Dubin reference with the Schwab and WO '021 references. Further, the Examiner has merely stated that the proposed modification of the prior art would have been completed to provide the known benefits of the compounds. The proposed modification must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. The Examiner has not demonstrated that the modification would have had a reasonable expectation of success. Therefore, the Examiner has failed to make a *prima facie* case of obviousness.

Since the Applicants have traversed the Examiner's rejection in the last response filed on October 8, 2003 and in this present response, the Applicants request that the Examiner provide an Affidavit or other evidence of the motivation to combine the references, as required by MPEP 2144.03. The Examiner has not provided evidence of the motivation to combine the references, as required by MPEP 2144.03.

If Official Notice is taken of a fact, unsupported by documentary evidence, the technical line of reasoning underlying a decision to take such notice must be clear and unmistakable. MPEP 2144.03. If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on

sound technical and scientific reasoning to support his or her conclusion of common knowledge. See *In re Soli*, 317 F.2d 941, 946, 137 USPQ 797, 801 (CCPA 1963); *In re Chevenard*, 139 F.2d 711, 713, 60 USPQ 239, 241 (CCPA 1943). The applicant should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to challenge the assertion in the next reply after the Office action in which the common knowledge statement was made. MPEP 2144.03.

Further, if Applicant challenges a factual assertion as not properly officially noticed or not properly based upon common knowledge, the Examiner must support the finding with adequate evidence. MPEP 2144.03. If applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also *In re Zurko*, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001) ("[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings" to satisfy the substantial evidence test). If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2).

If applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate. MPEP 2144.03.

Applicant again requests that the Examiner provide an Affidavit or other evidence of the motivation to combine the references, as required by MPEP 2144.03.

In view of the above reasons, the Examiner has failed to make a *prima facie* case of obviousness.

As to the dependent claims, the argument and evidence set forth above is equally applicable here. If an independent claim is non-obvious under 35 U.S.C. § 103, then any

claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988). Since the independent Claim 1 is non-obvious, then the dependent Claims 3-7, 9, and 11-20 must also be non-obvious.

Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 1, 3-7, 9 and 11-20 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Peter-Hoblyn et al. (U.S. Patent No. 5,743,922) in view of WO 95/27021 and Schwab. The Examiner contends that “[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to add the organic nitrate ignition improver of Schwab and the anti-freeze inhibitor of WO `021 to the diesel fuel emulsions of Peter in order to provide their known benefits.” Applicants respectfully disagree with the Examiner’s contentions and traverse the rejection.

As stated above, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

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Reconsideration and withdrawal of this rejection is respectfully requested.

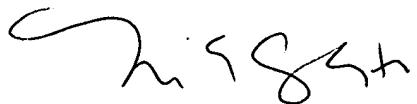
#### Request for Allowance

Entry of this Amendment will place the Application in better condition for allowance, or at the least, narrow any issues for an appeal. Accordingly, entry of this Amendment is appropriate and is respectfully requested.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,  
SIERRA PATENT GROUP, LTD.

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